

SECTION III—REMARKS

This amendment is submitted in response to the Office Action mailed March 30, 2006. Claims 1-5, 7-15 and 17-18 are canceled and new claims 27-44 are added. Claims 27-44 remain pending in the application. Applicants respectfully request reconsideration of the application and allowance of all pending claims in view of the above amendments and the following remarks.

Rejections Under 35 U.S.C. § 103

The Examiner rejected claims 1-5, 7-15 and 17-18 under 35 U.S.C. § 103(a) as obvious in view of, and therefore unpatentable over, U.S. Patent No. 6,559,530 to Hinzl *et al.* (“Hinzl”) in view of common knowledge and U.S. Patent No. 6,900,773 to Poilasne *et al.* (“Poilasne”).

As to claims 1-5, 7-15 and 17-18, Applicants respectfully submit that the Examiner’s rejections are rendered moot by the cancellation of these claims.

As to new claims 27-44, Applicants respectfully traverse the Examiner’s rejections. To establish a *prima facie* case of obviousness, three criteria must be met: (1) the prior art references must teach or suggest all the claim limitations; (2) some suggestion or motivation to combine the references must be found in the prior art; and (3) there must be a reasonable expectation of success. MPEP § 2143. As explained below, Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness.

New claim 27 recites an apparatus combination comprising:

a micro-electro-mechanical system (MEMS) die
including at least one MEMS device and one or more

MEMS contacts electrically coupled to the at least one MEMS device;

a cap coupled to the MEMS die to form an enclosure around the at least one MEMS device, the cap including one or more internal contacts, each internal contact being electrically coupled to a corresponding external contact by a via extending through the cap, wherein at least one of the internal contacts can be electrically coupled to at least one of the one or more MEMS contacts; and

a trace ring disposed within the enclosure and coupled to the at least one MEMS device, wherein one of an input terminal or an output terminal for the at least one MEMS device is coupled to the trace ring.

(italics added). The Examiner concedes that *Hinzel* does not disclose a trace ring. Nonetheless, to make up for this deficiency in *Hinzel*'s disclosure, the Examiner cites common knowledge and also cites *Poilasne* for its alleged disclosure of a trace ring. The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine *Hinzel* with common knowledge and *Poilasne* to arrive at the claimed invention.

Applicants respectfully disagree, on two grounds. First, what *Hinzel* discloses is not a trace ring, but a configurable magnetic dipole antenna. A trace ring is a ring-shaped trace (e.g., a conductive path) formed in or on the MEMS die that at least partially surrounds at least one MEMS device. The trace ring simply carries one or both of the input and the output to and/or from the MEMS device, and need not be sized or structured to resonate at any particular frequency, since resonance is not necessary for its

function. A dipole antenna is not a trace, nor would it be understood by one of ordinary skill in the art to be equivalent to a trace. Among other things, this is because a dipole antenna must be designed to resonate at any particular frequency and because traces could not function as dipole antennas because their capacities are too small.

Second, even if the dipole antenna disclosed in *Poilasne* could be considered a ring trace—which, as discussed above, Applicants do not concede—*Poilasne* does not disclose, teach or suggest that the dipole antenna should be a part of a MEMS module disposed within an enclosure created between the cap and the MEMS die. In fact, *Poilasne* quite clearly discloses that the dipole antenna should be disposed external to the control element 41, not internally within the control element 41. *Poilasne* therefore does not disclose, teach or suggest a trace ring “disposed within the enclosure.” Since the Examiner concedes that *Hinzel* also does not disclose such a feature and does not allege that common knowledge discloses such a feature, *Poilasne*, common knowledge and *Hinzel*, when combined, fail to meet at least one of the elements of the *prima facie* case of obviousness. Applicants therefore respectfully request withdrawal of the rejection and allowance of the claim.

Regarding claims 28-34, if an independent claim is non-obvious under 35 U.S.C. § 103, then any claim depending therefrom is also non-obvious. MPEP § 2143.03; *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). As discussed above, claim 27 is in condition for allowance. Applicants respectfully submit that claims 28-34 are therefore allowable by virtue of their dependence on an allowable independent claim, as well as by virtue of the features recited therein. Applicants therefore respectfully request withdrawal of the rejections and allowance of these claims.

New claim 35 recites an apparatus combination including:

a MEMS die including an array of MEMS radio frequency (RF) switches and one or more MEMS contacts electrically coupled to at least one of the switches in the array;

a cap coupled to the MEMS die to form an enclosure around the array, the cap including one or more internal contacts, each internal contact being electrically coupled to a corresponding external contact by a via extending through the cap, wherein at least one of the internal contacts can be electrically coupled to at least one of the one or more MEMS contacts; and

a trace ring disposed within the enclosure and coupled to the array, wherein one of the input terminal or the output terminal is coupled to the trace ring.

(emphasis added). By analogy to the discussion above for new claim 27, Applicants submit that *Hinzel* and *Poilasne*, cannot obviate the claimed combination because, when combined, they fail to meet at least one of the elements of the *prima facie* case of obviousness. Applicants therefore respectfully request withdrawal of the rejection and allowance of the claim.

Regarding claims 36-44, if an independent claim is non-obvious under 35 U.S.C. § 103, then any claim depending therefrom is also non-obvious. MPEP § 2143.03; *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). As discussed above, claim 27 is in condition for allowance. Applicants respectfully submit that claims 36-44 are therefore allowable by virtue of their dependence on an allowable independent claim, as well as by virtue of the

features recited therein. Applicants therefore respectfully request withdrawal of the rejections and allowance of these claims.

Conclusion

Given the above amendments and accompanying remarks, all claims pending in the application are in condition for allowance. If the undersigned attorney has overlooked a teaching in any of the cited references that is relevant to allowance of the claims, the Examiner is requested to specifically point out where such teaching may be found. Further, if there are any informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact the undersigned attorney at (206) 292-8600.

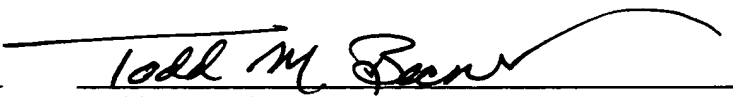
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Respectfully submitted,

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Date: 6-27-06



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